

# Investigating Deccan-induced environmental changes, prior to the K/Pg mass extinction

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~66 million years ago, the Earth experienced two major events – the Chicxulub impact and the eruption of the Deccan Traps Large Igneous Province. Whereas the former is widely implicated as the main driver of the Cretaceous-Paleogene (K/Pg) mass extinction, the exact environmental impacts of the preceding Deccan trap volcanism require further research. Although a causal link between Deccan volcanism and the Late Maastrichtian Warming Event (LMWE) has been made – no acidification proxies have been generated for this interval. My MScR project aims to use paired benthic trace element (B/Ca, Mg/Ca) analyses to quantify the changes in climate and carbonate chemistry during the Late Maastrichtian Warming Event (LMWE) at ODP 1262. We have generated high resolution, novel benthic B/Ca records which aim to test if ocean acidification occurred during this hyperthermal event. These data were then compiled against established geochemical datasets from across this interval. Our preliminary data from ODP 1262 show a decrease of ~18.64  $\mu\text{mol/mol}$  during the onset of the event suggesting ocean acidification caused by Deccan outgassing. The results of my research project will contribute to improving our understanding of the environmental response to Deccan volcanism, prior to the K/Pg mass extinction.